

L 18546-63

ACCESSION NR: AP3006052

3
and with other hot and cold methods for metal forming. V. I. Lytkin's report on heating installations was received with special interest. A demonstration of explosion-stamping was shown by workers from repair shops of Ust'-Kamenogorsk Titanium-Magnesium combine, and the process was explained by V. I. Makridin. The subject of industrial safety received a great deal of attention. The participants agreed that mechanization and automation were not being adopted fast enough by the local industries, and recommended an acceleration of such adoptions.

ASSOCIATION: [Abstracter's Note: Three organizations co-joined for the occasion and listed in the abstract.]

SUBMITTED: 00

DATE ACQ: 16Sep63

ENCL: 00

SUB CODE: IE, ME

NO REF SOV: 000

OTHER: 000

Card 2/2

YELPIDIN, B.P., inzh.

Seminar of welders in Kazakhstan. Svar. proizv. 12:41 D '63.
(MIRA 18:9)

KORMUSHKIN, K.A.; ZAYONCHKOVSKIY, A.D.; ALEKSEYENKO, V.I.;
BERNSHTEYN, M.Kh.; YABKO, Ya.M.; KITAYEV, L.P.; YELPIDIN, N.F.;
KIRIYENKO, N.V.

Use of low-pressure polyethylene for the manufacture of sole
parts. Kozh. obuv. prom. 5 no.7:26-29 JI '63.

(MIRA 16:8)

(Boots and shoes, Rubber)

YELPIDINSKIY, A.V.; SHAPIRO, F.L.; SHTRANIKH, I.V.

Measurement of the effective cross section of the Li^6 (n, α)
reaction for 2,5 Mev neutrons. Atom. energ. suppl. no. 5:75-89
'57. (MIRA 11:2)
(Nuclear reactions) (Lithium--Isotopes)

20683

9.6150
21.5200

S/120/61/000/001/017/062
E032/E314

AUTHORS: Yelpidinskiy, A.V. and Fetisov, I.N.

TITLE: A Thin Window Scintillation α -detector

PERIODICAL: Pribery i tekhnika eksperimenta, 1961, No. 1,
pp. 57 - 60

TEXT: In portable instruments the α -particle probe is usually designed so that the working volume is separated from the source by a thin window. The Soviet end-window α -counters CAT-7 (SAT-7), ~~T-8050J~~ (T-80 BFL), etc. and scintillation α -detectors covered with aluminium foil (Tucc (Tiss), ~~P-349-2~~ (P-349-2)) have the following average values of window thickness and working volume, respectively: $d \approx 18$ mm of air, $e \approx 2$ mm of air. In order to improve the efficiency of Soviet counters the present authors have calculated corrections for absorption and have designed an α -probe which is very similar to that reported by Grawes, Webb and Davis in Ref. 2. The phosphor was ZnS(Ag) (80 mm diameter, 5 mm thick). The phosphor is deposited on a perspex backing from a water suspension and is bonded to

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E032/E314

A Thin Window

the perspex backing by dichlorethane. After a drying procedure the specimen is placed into a special press in which it is heated to 220 °C and then subjected to a pressure of 150 atm. for 25 min. The heater is then switched off and the specimen is cooled under pressure to room temperature. The phosphor is then coated (by evaporation) with an aluminium film

(40-80 $\mu\text{g}/\text{cm}^2$). This film is then covered by a polystyrene film which is again coated with aluminium. The total thickness of this light screen is 120 $\mu\text{g}/\text{cm}^2$ aluminium and

30 $\mu\text{g}/\text{cm}^2$ polystyrene. This equivalent to 1 mm of air. When the phosphor was illuminated with 1 000 lux, the dark current of the photomultiplier was increased by a factor of a few tens. Dark-current pulses were found not to exceed the discrimination level against the γ -background. Thus the probe can be used in all normal experiments but it cannot be illuminated directly by sunlight. The results obtained are summarised as follows. Scintillation detectors covered with a thin window of the above type have a good reproducibility ($\pm 2\%$). Detectors

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A Thin Window

80 mm in diameter and having thin windows equivalent to up to 6 mm of air were found to be satisfactory. The efficiency of the scintillators when working in conjunction with the $\Phi 37-24$ (FEU-24) photomultiplier was found to be 87% at 5.3 MeV and 73% at 4.5 MeV. The efficiency is several times greater than for the commercial counters available in the Soviet Union. The aluminium coating is sufficiently opaque and rigid for use in a portable instrument. Acknowledgments are expressed to M.D. Galanin for interest in the work, to O.A. Suyetov and V.S. Konovalov for help in the preparation of the detectors and in measurements and to S.A. Fridman, A.V. Lavrov and B.M. Gugel for valuable advice. There are 4 figures, 1 table and 3 references: 1 Soviet and 2 non-Soviet.

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S/120/61/000/001/017/062

E032/E314

A Thin Window

ASSOCIATION: Fizicheskiy institut AN USSR (Physics
Institute of the AS USSR)

SUBMITTED: December 2, 1959

Card 4/4

29597

S/120/61/000/004/006/034

E032/E314

21.6000

AUTHORS: Yelpidinskiy, A.V. and Fetisov, I.N.

TITLE: Dependence of the characteristics of a scintillation α -particle detector on the granularity of ZnS

PERIODICAL: Pribery i tekhnika eksperimenta, no. 4, 1961, pp. 52 - 57

TEXT: In a previous paper (Ref. 1 - this journal, 1961, no. 1) the present authors have described the technology of preparation of scintillation α -particle detectors with very thin windows. The detectors are usually of the form shown in Fig. 1. In the present paper, the authors report further work aimed at establishing the optimum size of the ZnS grains. It was found that the optimum characteristics were obtained when the linear dimensions of the grains were of the order of 4μ . The resolution of these detectors is about 10 μ sec and the necessary amplification with a 1 V threshold is 1 - 10. The counting efficiency for a non-self-absorbing source in the immediate contact with the detector is found to be of the order of 90% for 4 - 6 MeV α -particles. In other cases the efficiency is

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29597

S/120/61/000/004/006/034

Dependence of the characteristics. E032/E314

typically of the order of 30% (depending on the thickness of the source). Comparison with other detectors shows that the present device compares favourably with the ionization chamber. It has the advantage that it is compact and simple to use and does not require large amplification coefficients or photo-multiplier supply stability. The detectors are convenient both in absolute measurements and as radiation monitors. Acknowledgments are expressed to M.D. Galanin for interest in this work and to O.A. Suyetov for assistance in the preparation of the detector. There are 4 figures, 3 tables and 3 references: 2 Soviet-bloc and 1 non-Soviet-bloc. The English-language reference mentioned is: Ref. 2 - M.G. Holloway and M.S. Livingston - Phys. Rev., 1938, 54, 18. ✓

ASSOCIATION: Fizicheskii institut AN SSSR
(Physics Institute of the AS USSR)

SUBMITTED: October 12, 1960

Card 2/2 2

32152
S/120/62/000/003/014/048
E032/E114

21.72 00

AUTHORS: Yelpidinskiy, A.V., and Roslik, S.F.

TITLE: Determination of the concentration of β -active gases in air

PERIODICAL: Pribery i tekhnika eksperimenta, ^{Vol 7} no.3, 1962, 71-72

TEXT: A description is given of a counter which can be used in the continuous control of the concentration of β -active gases in air and for the determination of the total activity of gases contained in small volumes. The energy range of the device is 18-400 KeV. The apparatus incorporates the flow ionization chamber shown in Fig.2. The air is drawn through the hoses at each end. The sensitivity of a 14-litre chamber was found to be 0.7×10^{-8} C/litre (tritium), 1.3×10^{-9} C/litre (Cl^{40}_2) and 0.8×10^{-9} C/litre (Xe^{133}), i.e. it is possible to measure β -active contaminations from 0.3 of the "maximum permissible concentration". The maximum concentrations which can be measured are of the order of 10^4 m.p.c. There are 2 figures and 1 table.

ASSOCIATION: Fizicheskiy institut AN SSSR

Card 1/2 / (Physics Institute AS USSR)

SUBMITTED: May 4, 1961

400 50

S/089/62/013/002/003/011
B102/B104

27.2400

24.6730

AUTHORS:

Yelpidinskiy, A. V., Fetisov, I. N.

TITLE:

The photoneutron yield and shielding problems of high-energy cyclic electron accelerators

PERIODICAL:

Atomnaya energiya, v. 13, no. 2, 1962, 140-144

TEXT: The giant-resonance photoneutron yield of various metals in absorptions of electrons with more than 30 Mev was calculated. The yield Q is obtained from the photon equilibrium spectrum $\Gamma_{ph}(E, E_0)$ of primary electrons with E_0 from the relation

$$Q = N n t_0 \int_{E_n}^{E_0} \sigma_{ph}(E) \Gamma_{ph}(E, E_0) dE$$

where N is the number of absorbed electrons, n the number of nuclei per cm^3 of the absorber, t_0 the radiation length, E_n the (γ, n) threshold energy, σ_{ph} the total photoneutron production cross section. An approximation,

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The photoneutron yield and ...

sufficient for calculating the shielding, gives $Q = 1.5 \cdot 10^{-4} N E_0 \text{ sec}^{-1}$ for an averaged neutron yield. This relation holds for any $E_0 \geq 30 \text{ Mev}$ (E_0 is the electron energy at the end of the acceleration cycle in Mev and N is the number of electrons accelerated during one second. In most cases all neutrons can be assumed to have formed either in the acceleration material or in the shield. If, furthermore, the dimensions of the apparatus are so chosen that the accelerator can be regarded as a point source, then a value of $h = 36 \log(N E_0 / R^2) - 340 [\text{cm}]$ is obtained for the smallest

necessary shield thickness if the shield consists of ordinary concrete, R being the distance $[\text{m}]$ of the external shield wall from the accelerator. This thickness guarantees a neutron flux weakening to $3 \text{ n/cm}^2 \text{ sec}$. The corrections for the finite dimensions of the accelerator can be made by the usual formulas. These estimates of shield thickness take no account of the neutrons due to bremsstrahlung. This kind of neutron radiation, however, depends considerably on the shield structure. It constitutes a local hazard greater than primary bremsstrahlung only when the concrete shield contains additional layers heavy metal ($> 15 \text{ cm Pb}$ or 35 cm Fe).

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The photoneutron yield and ...

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B102/B104

In this case $\eta \lesssim 1$, otherwise $\eta \simeq 2 \cdot 10^{-3}$ (η is the ratio between neutron radiation hazard and primary bremsstrahlung hazard). There is 1 table.

SUBMITTED: June 29, 1961

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L 13276-66 EWT(1)/EWA(j)/EWT(m)/T/EWA(b)-2/EWA(h) JK

ACC NR: AR5028751

SOURCE CODE: UR/0169/65/000/008/B014/B014

SOURCE: Ref. zh. Geofizika, Abs. 8892

AUTHOR: Yelpidinskiy, A. V.; Roslik, S. F.

TITLE: An instrument for checking air contamination by low energy β -active gases

CITED SOURCE: Tr. po radiats. gigiyene. Leningr. n.-i. in-t radiats. gigiyeny,
1964, vyp. 2, 146-151

TOPIC TAGS: beta particle detector, radioactive contamination, ionization chamber,
ATMOSPHERIC CONTAMINATION

TRANSLATION: The author describes an instrument which can be used to analyze β -particles with a radiation energy of 0.4 Mev. The pickup is a continuous-flow ionization chamber with a capacity of 14 liters. The response time of the instrument is determined by the pumping rate which is 2-2.5 liters per minute. A "catcus" type amplifier is used with a sensitivity of $4 \cdot 10^{-4}$ a. Provision is made for a system which cleans the aerosols from the air. The concentration of β -active material is determined from the ionization current. The instrument may be used to measure a tritium concentration of $0.7 \cdot 10^{-8}$ Curies per liter; a carbon-14 concentration of

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UDC: 551.510.7

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ACC NR: AR5028751

$1.3 \cdot 10^{-9}$ Curies per liter; and a xenon-133 concentration of $0.8 \cdot 10^{-9}$ Curies per liter.

SUB CODE: 18,04

Card 2/2

YELPIDINSKIY, V. N.

YELPIDINSKIY, V. N. -- "Standardization of the Design of the Crankshaft of a Stationary Internal Combustion Engine." Min Higher Education USSR, Moscow Order of Labor Red Banner Higher Technical School imeni Bauman, Moscow, 1955 (Dissertation For the Degree of Doctor of Technical Sciences)

SO: Knizhnaya letopis'. No. 37. 3 September 1955

YELPIDINSKIY, V.N., dotsent, kand.tekhn.nauk

Torque of an internal combustion engine. Izv.vys.ucheb.
sav.; mashinostr. no.2:55-69 '59. (MIRA 13:3)

1. Moskovskoye vysshaye tekhnicheskoye uchilishche imeni
N.Ye. Bauman.

(Torque) (Gas and oil engines)

YELSAKOV, H.N., inzh.

Tolerances for switch boxes. Put' i put. khos. no. 6:35 Je '58.
(Railroads--Switches) (MIRA 11:6)

YELSAKOV, N.N., inzh.; FRISHMAN, M.A., prof.; ALEKSEYEV, Ya.K.

Transitional platings or rails? Put' i put. khoz. no.6:25 Je '59.
(MIRA 12:10)

1. Nachal'nik strelochnogo zavoda, Dnepropetrovsk (for Alekseyev).
(Railroads--Rails--Fastenings)

BEREZOVSKIY, Mikhail Vladimirovich; YELSAKOV, N.N., red.; LANOVSKAYA,
M.P., red.izd-vo; ISLENT'YEVA, P.G., tekhn.red.

[Track junction in enterprises of ferrous metallurgy] Soedineniia
putei na predpriatiakh chernoi metallurgii. Moskva, Gos.
nauchno-tekhn.izd-vo po chernoi i tsvetnoi metallurgii, 1960.
356 p. (MIRA 13:5)

(Metallurgical plants--Equipment and supplies)
(Railroads, Industrial)

YELSAKOV, M. N., inzh.

Switches for high-speed traffic. Put' i put. khos. 7 no.3:13-14
'63. (MIRA 16:4)

(Railroads—Switches)

PETROV, A.A.; LEBEDEV, V.B.; MARETINA, I.A.; YELSAKOV, N.V.

Nuclear magnetic resonance spectra of enynes and the -effect.
Zhur.ob.khim. 32 no.5:1711-1712 My '62. (MIRA 15:5)

1. Leningradskiy tekhnologicheskii institut imeni Lensovetu.
(Hydrocarbons--Spectra)

PETROV, A.A.; YELSAKOV, N.V.; ZAVGORODNIY, V.S.; LEBEDEV, V.B.

Study of H-bonds formed by acetylene compounds by means of nuclear magnetic resonance spectroscopy. Part 7: Interaction with solvents of acetylenic, diacetylenic, and 1,3-enyne silicon hydrocarbons and tin hydrocarbons. Teoret. i eksper. khim. 1 no. 5:697-700 S-O '65 (MIRA 19:1)

1. Leningradskiy tekhnologicheskii institut imeni Lenooveta.
Submitted January 25, 1965.

PETROV, A. A.; YELSAKOV, N. V.

Effect of solvents on the nuclear magnetic resonance spectra
of diacetylene and vinylacetylene. Zhur. ob. khim. 33 no.1:
319-320 '63. (MIRA 16:1)

1. Leningradskiy tekhnologicheskij institut imeni Lensoveda.

(Butadiyne—Spectra) (Butenyne—Spectra)
(Solvents)

YELISAKOV, N.V.; PETROV, A.A.

Use of nuclear magnetic resonance spectroscopy in studying
nitrogen bonds formed by acetylene compounds. Part 4. (pt.
1 spektr. 16 no.5:797-802 My '64. (1964 1964)

YELSAKOV, N.V.; PETROV, A.A.

Studying H-bonds, formed by acetylene hydrocarbons, with the aid of
nuclear magnetic resonance spectroscopy. Opt. i spektr. 16 no.1
148-151 Ja '64. (MIRA 17:3)

PETROV, A.A.; YELSAKOV, N.V.; LEBEDEV, V.B.

Use of nuclear magnetic resonance spectroscopy in studying
hydrogen bonding formed by acetylene compounds. Opt. i
spektr. 16 no.6:1013-1015 Je '64. (MIRA 17:9)

PETROV, A.A.; YELSAKOV, N.V.; LEBEDEV, V.B.

Study of hydrogen bonds, formed by acetylenic hydrocarbons,
with the aid of nuclear magnetic resonance spectroscopy. Part 6.
Opt. i spektr. 17 no.5:679-682 N '64.

(MIRA 17:12)

YEISAKOV, V.H., slesar'.

Rebuilding feed pumps of the P-150 X 3 type. Energetik 4 no.3:
11-13 Mr '56. (Boilers--Accessories) (MIRA 9:6)

YELSAKOVA, G. N., POLOVYANYUK, A. F., CHEKMIN, I. F., KONAREV, V. G.
(USSR)

"The State of Nucleic Acids in the Plant Cell."

Report presented to the 5th International Biochemical Congress,
Moscow, 10-16 August 1961

Y. ELSEKOVA, T. N.
USSR / Plant Physiology. General Problems.

H-1

Abs Jour : Ref Zhur - Biol., No 16, 25 Aug 1957, No 68392

Author : Serveev, L.I., Elsekova, T. N.

Title : Hexachlorane /1, 2, 3, 4, 5, 6 Hexachlorocyclohexane/ as a Stimulator and Inhibitor of Plant Growth.

Orig Pub : Biol. Gl. botan. sode AN SSSR, 1956, No 26, 59-63

Abstract : Corn seed was dusted with various doses of a 12% hexachlorane insecticide dust at the rate of 0.5-5 kg/centner. Untreated seeds served as the control. The use of a dose of 0.5 kg/centner under laboratory conditions clearly indicated a stimulatory effect; a dosage of 1 kg/centner produced a marked inhibition of rootlet growth; with dosages of 2 kg/centner and higher, there was observed development of misshapen sprouts. Anatomical studies showed that hexachlorane produced a marked inhibition of cell growth lengthwise and that they grew in width. In vegetative tests, the action of

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Instr. Biology, Bashkir Affil AS USSR

USSR / Plant Physiology. General Problems.

H-1

Abs Jour : Ref Zhur - Biol., No 16, 25 Aug 1957, No 68892

hexachlorane became weaker as a consequence of the high absorptive capacity of the soil. A stimulatory effect appeared at a dosage of 2 kg/centner, while inhibition of growth of the sprouts was observed at a dosage of 3 kg/centner and higher. The harmful effect of hexachlorane became greater at higher dosages (above 2 kg/centner) if the seed prior to dusting was soaked in water or was not sown for a considerable time so that it remained in the dusted condition. The study was carried out in the biological institute of the Bashkir affiliate of Acad. Sci. USSR.

Bibli. 9 references.

Card 2/2

AUTHORS: Konarev, V. G., Zakirov, S. Z., 20-120-2-53/63
Yelsakova, T. N.

TITLE: The Pyroninophily of the Nucleus as an Index of the State
of Desoxyribonucleic Acid (Pironinofiliya yadra kak
pokazatel' sostoyaniya dezoksiribonukleinovoy kisloty)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 120, Nr 2,
pp. 409-411 (USSR)

ABSTRACT: It is said that in the case of tissue dyeing according to
Unna (references 1,3) pyronine is adsorbed by the cytoplasm
and the nucleole, which contain ribo-nucleic acid (RNA);
methylene green on the other hand is adsorbed by the
nucleus-chromatine which contains desoxyribonucleic acid
(DNA). The authors found out that the pyroninophily of the
nucleus occurs more frequently in the parenchym, namely in
sclerogen cells of the small-cellular parenchym on the day
before their transformation into mechanical elements,
furthermore in cells which surround the bigger vessels
during the phase of their formation. When the plant starves,
pyroninophily occurs in the nuclei of young tissues which are
rich of DNA, also in meristem. Single nuclei furthermore

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The Pyroninophily of the Nucleus as an Index of the State
of Desoxyribonucleic Acid

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preserve their adsorbing power for methylene green by gaining the pyroninophile substance. Such "transition"-nuclei become dirty green or brown in the case of Unna-dyeing. The nuclei of the vessel-forming cells of the dermatogen, the companions of the sieve-type cells and of the procambial system, become only pyroninophile in the case of a most extreme exhaustion of the plant. In the following the authors describe the nature of the pyroninophily (references 3, 9-14) and state the fact of a commonness between the phenomena of the artificial and natural pyroninophily. 2 very important circumstances point to this fact. 1. The nuclei which have a natural pyroninophily show a quite clear nuclear reaction according to Fel'gen (Felgen?) without a preceding hydrolysis in 1 N HCl. 2. The artificially produced (according to an acidity-hydrolysis), as well as the naturally produced pyroninophile nuclei distinguish themselves by a high affinity to the acid dye - the permanent green (zelenyy prochnyy) which is, as it is known, a quite specific reagent for free histones (references 15,16). From all those facts we

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The Pyroninophily of the Nucleus as an Index of the State
of Desoxyribonucleic Acid

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see that the weakening of the adsorption of methylene green and the occurring of pyroninophily in the cell-nucleus as well under the influence of an acidity-hydrolysis, as in the case of a change of the physiological state of tissue, are connected with the change of state of DNA in the nucleus: a) In the case of molecule-depolymerization; b) In the case of partial chemical degradation, namely the splitting off of purine bases and the formation of apurinic acid which can result in a Fel'gen reaction without a preceding hydrolysis. c) In the case of a weakening of the binding of DNA to the protein in the nucleoproteides. To wind up, the method of determination of DNA in the nucleus is described. By means of this method it is possible to show the different qualities of the nuclei not only within homogeneous tissues, but even within the cell during its division. This method can be used for the evaluation of changes due to age or functional changes in the cells in the decision of several questions of cytochemistry and cytophysiology. There are 17 references, 9 of which are Soviet.

Card 3/4

The Pyroninophily of the Nucleus as an Index of the SOV/20-120-2-53/63
State of Desoxyribonucleic Acid

ASSOCIATION: Institut biologii Bashkirskogo filiala Akademii nauk SSSR
(Institute of Biology of the Bashkir Branch, AS USSR)

PRESENTED: January 11, 1958, by V. A. Engel'gardt, Member, Academy of
Sciences, USSR

SUBMITTED: December 29, 1957

1. Plants--Biochemistry 2. Plants--Color 3. Plant pigments
--Chemical properties 4. Nucleic acids--Determination

Card 4/4

- [illegible]

Report submitted but not presented at the
Congress. (March 1906)

YEL'SHANOVA, D.M.

Practicability of using a VEG cable in storage battery rooms.
Energetik 2 no.2:34 P '54. (MLRA 7:4)
(Electric cables)

YEL'SHANOVA, Ye.M., inzhener.

Welding bus bars and their branches in switchgear in
electric stations and substations. Prom.energ. 11 no.11:
29-30 N '56.

(MLRA 9:12)

(Electric bus bars) (Welding)

YEL'SHANOVA, Ye.M., inzhener.

Using PRVPM cables. Prom.energ. 12 no.1:34-35 Ja '57.

(MLRA 10:2)

(Electric cables)

YEL'SHANOVA, Ye. M.

YEL'SHANOVA, Ye. M.

Specific loading on contact connections. Prom.energ. 12 no.8:39
Ag '57. (MIRA 10:10)

(Electric contactors)

PAULLER, O.F.; YEL'SHANSKAYA, N.I.

Observations on the ability of *Ceratophyllus garei* Roths fleas to migrate. Izv. Irk. gos. nauch.-issl. protivochum. inst. 21:340-342 '59. (MIRA 14:1)

(SELENGA RIVER---FLEAS)

STENINA, L., inzh.-prepodavatel'; TOBOL'SKIY, V., shturman-prepodavatel';
TORGOVITSKAYA, A., inzh.-prepodavatel'; YELSHANSKIY, A., inzh.-
prepodavatel'; BUNTOV, H., prepodavatel'

Lively, picturesquely, graphically. Grashd.av. 17 no.7:11-12
J1 '60. (MIRA 13:8)

(Aeronautics--Study and teaching)

25663

YELCHANSKIY, A. F.

Pryt peredovykh l'nozavodov.

Takstil. Prom—st', 1948, No. 6, s. 41-42.

SO: Iotopis' Zhurnal'nykh Statey, No. 30, Moskva, 1948

TOMILOVA, P. N., ELSHANSKIY, A. P.

Flax.

Processing short-fiber retted flax. Tekst. prom. 12 no. 9, 1952.

9. Monthly List of Russian Accessions, Library of Congress, December 1957/2 Uncl.

^{p.}
YELSHANSKIY, A. (Vyaz'ma).

Northern silk. Tekh.molod. 21 no.11:11-14 N '53.

(MLBA 6:11)
(Flax)

YEISHANSKIY, A.P.

Pneumatic conveyor at a linen factory. Tekst. prom. 17 no.4:51 Ap '57.
(MLRA 10:4)

1. Glavnyy inzhener Vyazemskoy mekhanicheskoy elektromontashnoy
masterskoy Glavzagotl'nopen'koproma.
(Pneumatic tube transportation)

YELSHANSKIY, A.P.

Instruction in the maintenance of power equipment. Tekst. prom.
18 no.2:56-57 F '58. (MIRA 13:3)

1. Glavnyy inzhener elektromontashnoy masterskoy.
(Electric machinery--Maintenance and repair)
(Textile factories--Equipment and supplies)

YEL'SHAYEV, V.N.

Motion of the cone bobbin. Izv. vys. ucheb. zav.; tekhn. teks.
prom. no.6:70-75 '65. (MIRA 19:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tekstil'noy
i legkoy promyshlennosti. Submitted April 15, 1965.

SOV/112-57-9-18505D

Translation from: Referativnyy zhurnal, Elektrotehnika, 1957, Nr 9, p 58 (USSR)

AUTHOR: Yelshin, I. M.

TITLE: Attrition Resistivity of Hydroengineering Concretes and Mortars
(Soprotivlyayemost' istiraniyu gidrotekhnicheskikh betonov i rastvorov)

ABSTRACT: Bibliographic entry on the author's dissertation for the degree of
Candidate of Technical Sciences, presented to In-t sooruzh. UzSSR (Institute
of Constructions, UzbekSSR), Tashkent, 1956.

ASSOCIATION: In-t sooruzh. UzSSR (Institute of Cgnstructions, UzbekSSR)

Card 1/1

YELSHIN, I. M.

124-58-6-7093

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 6, p 114 (USSR)

AUTHOR: Yelshin, I. M.

TITLE: Wear-resistance Analysis of Protective Coatings for Hydraulic Structures (Nekotoryye rezul'taty issledovaniya iznosostoykosti zashchitnykh pokrytiy gidrotekhnicheskikh sooruzheniy)

PERIODICAL: Tr. Sredneaz. n.-i. in-ta irrigatsii, 1956, Nr 80, pp 36-42

ABSTRACT: Data are given from tests made in the SANIIRI (Central Asia Scientific Research Institute for Irrigation) building-materials laboratory of the wear resistance of concretes, mortars, and various coating materials used in hydraulic construction. Included are results of impact tests conducted on certain of these materials.

Reviewer's name not given

1. Dams--Coatings 2. Coatings--Properties 3. Coatings--
Test results

Card 1/1

YELSHIN, I. M.

124-58-6-7094

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 6, p 114 (USSR)

AUTHOR: Yelshin, I. M.

TITLE: The Wear Resistance of Concretes and Mortars Used in Hydraulic Structures (Voprosy soprotivlyayemosti istiraniyu gidrotekhnicheskikh betonov i rastvorov)

PERIODICAL: Tr. Sredneaz. n.-i. in-ta irrigatsii, 1956, Nr 82, pp 17-34

ABSTRACT: Results are given of wear-resistance tests of cement-based concretes and mortars conducted by the author at SANIIRI (Central Asia Scientific Research Institute for Irrigation) in 1954-1956. Recommendations are made concerning manufacturing techniques and work procedures.

Reviewer's name not given

1. Dams--Coatings 2. Cement coatings--Properties 3. Coatings--
Test results

Card 1/1

8(6), 14(10)

SOV/112-59-3-4658

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 3, p 53 (USSR)

AUTHOR: Yelshin, I. M.

TITLE: Destruction of the Gissar Dam Apron by Bottom Silt
(Razrusheniye vodoboya Gissarskoy plotiny donnymi nanosami)

PERIODICAL: Tr. Sredneaz. n.-i. in-ta irrigatsii, 1957, Nr 90, pp 69-74

ABSTRACT: The intake-works dam (on the Dyushambinka River) is designed to handle a maximum flood of $600 \text{ m}^3/\text{sec}$ and has been tested in handling the maximum computed flood of $800 \text{ m}^3/\text{sec}$. The average flood river discharge is $200\text{-}300 \text{ m}^3/\text{sec}$. Stream velocities on the apron are as high as $11\text{-}12 \text{ m/sec}$. The dam apron has a stepped construction: piers, then a 2-m long spillway plate with a 1:3 slope, then a 6-m long horizontal platform, then a sloping floor throwing the water 3-meter deep to the river bed, and finally, triangular-section dentals. The concrete apron is 0.8 m thick, and its overflow part is 1.0 m thick. The project provided for a wooden revetment coating the apron

Card 1/2

8(6), 14(10)

SOV/112-59-3-4658

Destruction of the Gissar Dam Apron by Bottom Silt

and dentals, but the revetment never materialized in practice. During floods, the drifting material consisting of fractions of 200 mm size and some individual units up to 2 m caused considerable wear and destruction to the structure concrete. Particularly after the disastrous flood of 1952, the concrete apron, the down apron, and the downstream bed were considerably damaged. Causes of destruction are analyzed, repair work is described, revetment materials are recommended, etc. Photographs of the damage are supplied.

A.P.T.

Card 2/2

89962

S/097/60/000/011/002/007
A003/A029

15.3000 1273,2209

AUTHORS: Yelshin, I. M., Candidate of Technical Sciences,
Oster-Volkov, N. N., Engineer.

TITLE: Plastoconcrete on the Base of "FA" ("FA") Monomer

PERIODICAL: Beton i zhelezobeton, 1960, No. 11, pp. 503-506

TEXT: A plastoconcrete was investigated, in which cement was substituted by the synthetic "FA" furfurole-acetone resin, which is a condensation product of furfurole with acetone in an alkaline medium. The Ferganskiy gidroliznyy zavod (Fergana Hydrolysis Plant) was the first in the USSR to develop the production of this monomer. The plastoconcrete based on this monomer was tested at the VNII-plastmass (VNII of Plastics) and MKhTI im. Mendeleyev. In the case of a coarse filler the following formulation was used: 1 part of filler, 0.09 "FA" monomer, 0.02 furfurole, 0.03 benzenesulfoacid; in the case of sand filler: 1 part of sand, 0.14 "FA" monomer, 0.02 furfurole, 0.04 benzenesulfoacid. The hardening lasted from several minutes to several months. The final strength depended on the amount of acid present and on the temperature of the surrounding air.

Card 1/3

89962

S/097/60/000/011/002/007
A003/A029

Plastoconcrete on the Base of "φA" ("FA") Monomer

The optimum amount of acid is 25 - 30 % of the monomer weight. The results of the strength tests are shown in Table 1.

Type of test	Strength limit in kg/cm ² at the age of:					
	1 day	3 days	7 days	28 days	90 days	180 days
Compression .	313	410	500	533	656	721
Stretching ..	-	37	-	72	-	-
Bending	-	93	130	160	-	-

In order to obtain a 28-day strength already after one day the amount of acid must be raised. The tests for watertightness showed that samples 25 mm thick withstood a pressure of 14 atm at the age of 7 days. Tests carried out at -20°C in the course of 50 cycles on 7-day samples did not reveal changes in the weight and the strength of the samples. The wear resistance is 10 times higher than in cement samples of the composition 1 : 3 at the age of 33 days. Plastoconcrete has a good adhesion to dry cement samples, but the adhesion to wet samples is low. Sand with carbonate admix-

Card 2/3

89962

Plastoconcrete on the Base of "FA" ("FA") Monomer

S/097/60/000/011/002/007
A003/A029

tures can be used as filler if the amount of catalyst (acid) is increased. Industrial tests of the plastoconcrete were made at the Verkhne-Chirchik power station (UzSSR) and at the Pal'ma dam on the Isfayrom-Say river. The tests have shown that plastoconcrete can be prepared and laid by methods used with cement concrete. Tests were also conducted by NIIKhimmash and TsNII Podzemshakhtstroy. They have shown that plastoconcrete is resistant to acids of various concentration, alkalies, solvents, etc. It has good dielectric properties. Wood and other organic material is protected from rotting when coated with this concrete. Aging tests conducted since 1952 did not show any changes in its quality. It is hoped to reduce the cost of one m³ of plastoconcrete from 1,600 to 600 - 700 rubles by improving the production methods for furfurole. There are 2 tables and 1 photograph.

Card 3/3

15-3200

31568
S/081/61/000/022/066/076
B101/B147

AUTHORS: Yelshin, I. M., Savchenko, M. N., Feday, V. N.

TITLE: Tests of plastic concrete based on "FA" synthetic resin on laboratory and industrial scale

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 22, 1961, 448, abstract 22P41 (Tr. Sredneaz. n.-i. in-ta irrigatsii, no. 100, 1960, 135 - 148)

TEXT: The authors describe properties, production methods, and test results of organomineral concrete (OMC) based on "FA" ("FA") furfural acetone monomer. OMC is superior to cement concretes as to its physico-mechanical properties. After 28 days, the maximum compressive strength is 700 kg/cm², the tensile strength, 64 - 70 kg/cm², the bending strength, 160 - 200 kg/cm². The concrete is water- and frostproof. The dependence of the properties of OMC on the type of sand used was studied; best characteristics were found for OMC of the following composition (parts by weight): Chirchik sand (washed), 1; "FA" monomer, 0.14; furfural, 0.02; benzene sulfonic acid, 0.04. OMC is virtually produced like cement con-

X

Card 1/2

Tests of plastic concrete...

31568

S/081/61/000/022/066/076

B101/B147

crete. By increasing the content of benzene sulfonic acid, it is possible to produce OMC on the basis of sands with carbonate impurities. Because of the high price of "FA" monomer it is recommended to use OMC for cover plates, plaster, and the like under conditions where ordinary concretes are not firm enough. [Abstracter's note: Complete translation.] X

Card 2/2

41919

S/191/62/000/011/016/019
B101/B186

15.3060

AUTHORS: Cheremukhin, I. K., Yelshin, I. M., Manannikov, P. M.

TITLE: Stability of plastic concrete in some aggressive media and organic solvents

PERIODICAL: Plasticheskiye massy, no. 11, 1962, 64-65

TEXT: Plastic concrete made of furfural acetone and andesite sand was exposed to aggressive media after 80-90 days setting at 20°C for 30, 90, 150, or 180 days, respectively. Results: The concrete was stable against 36% HCl, up to 85% H₂SO₄, 5% acetic acid, 50% alkali lye, 25% NH₃ solution, 26% MgSO₄ solution, 20% KCl solution, 40% NH₄Cl solution, kerosene, and gasoline. It was unstable against 3% HNO₃, 96% H₂SO₄, 100% acetic acid, benzene, ethanol, and acetone. Therefore, plastic concrete can be widely used in the chemical industry; also for boilers in the cellulose and other industries of hydrolysis; in the manufacture of glucose from wood waste, in the processing of lignin, in the production of superphosphate, etc. The stability of plastic concrete setting at 80-90°C within 5-7 hrs to

Card 1/2

Stability of plastic concrete ...

S/191/62/000/011/016/019
B101/B186

various chemical aggressive media is investigated in detail. There is
1 table.

f

Card 2/2

YELSHIN, I.M., kand.tekhn.nauk (Stavropol'-na-Volge); MANANNIKOV, P.M.,
Inzh. (Stavropol'-na-Volge)

Protecting fresh concrete with films of synthetic resins. Gidr.
i mel. 14 no.8:31-33 Ag '62. (MIRA 15:9)
(Concrete coating) (Resins, Synthetic)

YELSHIN, I.M., kand.tekhn.nauk

Lining made of concrete with plastic binder in hydraulic construction. Energ. stroi. no.27:55-58 '62. (MIRA 15:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut nerudnykh stroitel'nykh materialov i gidromekhanizatsii Akademii stroitel'stva i arkhitektury SSSR.
(Intakes (Hydraulic engineering)) (Concrete--Testing)

13K
ACCESSION NR: AR4015705

S/0081/63/000/023/0603/0603

SOURCE: RZh. Khimiya, Abs. 23T336

AUTHOR: Yelshin, I.M.; Matukhno, L.I.

TITLE: The problem of making monoliths from subassemblies made of plastic concrete

CITED SOURCE: Nauchno-tekhn. soobshch. Vses. n.-i. in-t nerudn. stroit. materialov i gidromekhaniz., no. 9, 1962, 71-76

TOPIC TAGS: concrete, plastic concrete, plastic concrete subassembly, prefabricated facing, FA resin, monolithization, cement

TRANSLATION: The authors present the results of investigations on plastic concrete and prefabricated facings made of plastic concrete. The possibility of joining freshly layered and hardened plastic concrete is demonstrated. Manufacture of monoliths from subassemblies made of plastic concrete requires the use of a cement based on FA resin. The formula for plastic concrete is presented. I. Uvarova.

DATE ACQ: 09Jan64

SUB CODE: MT

ENCL: 00

Card 1/1

CHEREMUKHIN, I. K.; YELSHIN, I. M.; MANANNIKOV, P. M.

Resistance of plastic concretes to corrosive agents and
organic solvents. Plast. massy no.11:64-65 '62.
(MIRA 16:1)

(Concrete--Testing)

VOLKOV, Valentin Georgiyevich, inzh.; YELSHIN, Igor' Mikhaylovich,
kand. tekhn. nauk; KHARIN, Arnold Ivanovich, kand. tekhn.
nauk; KHRUSTALEV, Mikhail Ivanovich, kand. tekhn. nauk;
GUREVICH, E.A., red.

[Enriching and fractionating natural sand for concrete by
the hydraulic method] Obogashchenie i fraktsionirovanie
prirodnkh peskov dlia betona gidravlicheskim sposobom.
Moskva, Stroizdat, 1964. 162 p. (MIRA 18:1)

YELSHIN, K.V.

Determining the true temperature of petroleum products in tanks.
Nefthos.33 [i.e.34] no.9:61-65 8 '56. (MLRA 9:10)
(Petroleum--Storage)

YELSHIN K.V.

MATSKIN, L.A.; KOVALENKO, K.I.; BABUKOV, V.G.; KONSTANTINOV, N.N.;
PONOMAREV, G.V.; PAL'CHIKOV, G.N.; PELENICHKO, L.G.; SHAMARDIN,
V.M.; GLADKOV, A.A.; BRILLIANT, S.G.; SHEVCHUK, V.Ya.; SOSHCHEN-
KO, Ye.M.; ALEKSANDROV, A.M.; BUNCHUK, V.A.; KRUPENIK, P.I.;
MAYEVSKIY, V.Ya.; YELSHIN, K.V.; GAK, Kh.A.; POTAPOV, G.M.;
KARDASH, I.M.; STEPURO, S.I.; KAPLAN, S.A.; SELIVANOV, T.I.;
YEREMENKO, N.Ya.; ZHUZH, A.D.; USTINOV, A.A.; GIRKIN, G.M.;
VOLOBUYEV, P.P.; CHERNYAK, I.L., nauchnyy red.; DESHALYT, M.G.,
vedushchiy red.; GENRAD'YEVA, I.M., tekhn.red.

[Combating losses of petroleum and petroleum products; materials
of the All-Union Conference on Means of Combating Losses of
Petroleum and Petroleum Products] Bor'ba s poteriami nefi i
nefteproduktov; po materialam Vsesoiuznogo sovestchaniia po bor'be
s poteriami nefi i nefteproduktov. Leningrad, Gos.nauchno-tekhn.
izd-vo nefi. i gorno-toplivnoi lit-ry, 1959. 157 p. (MIRA 13:2)

1. Nauchno-tekhnicheskoye obshchestvo nefiyanoy i gazovoy pro-
myshlennosti.

(Petroleum industry)

06573

SCV/170-59-9-14/18

10(2); 24(8)

AUTHOR: Yelshin, K.V.

TITLE: Natural Convection in an Oil Tank

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1959, Nr 9, pp 101-105 (USSR)

ABSTRACT: When petroleum and petroleum products are stored in metallic ground tanks, convective currents of a liquid and a gas-air mixture may arise due to temperature differences between the vertical metallic wall and the liquid. The author writes down equations of heat transfer for this system and simplifies them under an assumption that the rate of flow does not change along the wall of the tank but depends on the value of y-coordinate alone. The integration of the differential equations, 4 - 6, yields an expression for the velocity vector along the x-axis W_x given by Formula 8, and the value of heat transfer coefficient is expressed by Formula 14 which is similar to that obtained by Mikheyev [Ref 3]. The magnitude of the average convective liquid flow is given by Formula 17:

$$W_{av} = \frac{1}{6} \int_0^6 W_x dy = \frac{q\beta\theta\delta^2}{24 \nu_m}$$

Card 1/2

Natural Convection in an Oil Tank

06573

SOV/170-59-9-14/18

where β is the coefficient of volume temperature expansion of the liquid, θ is temperature difference, δ is the thickness of the boundary layer, and γ_m is the physical parameter of the liquid related to the average temperature of the boundary layer. The theoretical conclusions were compared with experimental data, and the agreement, as it is seen from Table 1, was found to be satisfactory.

There are: 1 table and 3 references, 1 of which is Soviet and 2 English.

ASSOCIATION: Nauchno-issledovatel'skiy institut po pererabotke nefi (Scientific Research Institute for Petroleum Processing), Ufa,

Card 2/2

YELSHIN, K.V.; KHAKITDINOV, K.Kh.; BRONSHTEYN, I.S.

Plastic floating roof as a means of controlling the evaporation
losses of petroleum and petroleum products. Trudy NIITransneft'
no.1:222-229 '61. (MIRA 16:5)
(Tanks) (Evaporation control)

YELSHIN, K.V.

Approximate solution of the equations of free convection near a
vertical nonisothermal wall. 'Trudy NIITransneft' no.1:230-239
'61. (MIRA 16:5)

(Heat—Convection)

YELSHIN, K.V.; SPEKTOR, I.B.; GUMEROV, A.G.

Evaporation losses of petroleum and petroleum products from tank
farms of petroleum refineries and the measures for their substantial
reduction. Trudy NIITransneft' no.1:240-246 '61. (MIRA 16:5)
(Evaporation control) (Tanks)

YELSHIN, K.V.; SPEKTOR, I.B.

Evaporation losses of gasoline in storage terminals and the measures
for reducing them. Trudy NII Transneft' no.1:247-253 '61.

(MIR: 16:5)

(Gasoline) (Evaporation control)

98

YELSHIN, K.V.; KHAKITDINOV, K.Kh.

Effectiveness of the radiant-heat insulation of storage tanks. Trudy
NIITransneft' no.1:254-259 '61. (MIRA 16:5)
(Insulation (Heat)) (Tanks)

YELSHIN, K.V.

Approximate solution of equations of the free convection of a liquid
near a vertical nonisothermal wall. Inzh.-fiz. zhur. 4 no.4:62-68
Ap '61. (MIRA-145)

1. Nauchno-issledovatel'skiy institut po transportu i khraneniyu
nefti i nefteproduktov, g. Ufa.
(Heat-Convection) (Hydrodynamics)

YELSHIN, K.V.

Calculating the losses of petroleum products in underground reservoirs.
Trudy NIITransneft' no.1:213-221 '61. (MIRA 16'5)
(Petroleum--Storage) (Evaporation control)

YELSHIN, K.V.

Internal painting of petroleum products tanks as a means for
improving evaporation control. Neft, khoz. 43 no.8:62-65
Ag '65. (MIRA 18:12)

Yelshina, M. A., Lydensberg, YE. G., Fedorova, L. G., Sofienko, N.YA., and
Konstantinova, A. A.

Continued studies of the spread of pathogenic strains of the intestinal
rod among children of the younger age. 34

Materialy nauchnykh konferentsii, Kiev, 1959. 288pp
(Kievskiy Nauchno-issledovatel'skiy Institut Epidemiologii i Mikrobiologii)

Yel'shina, M. A. and Zaydenberg, YE. G.,

Data of serotypic studies of pathogenic strains of intestinal rods in single children's collectives and in (sick) stationary patients. 37

Materialy nauchnykh konferentsii, Kiev, 1959. 288pp
(Kievskiy Nauchno-issledovatel'skiy Institut Epidemiologii i Mikrobiologii)

Yelshina, M. A.

Study of conditions, furthering the formation of pigment and apigmentic variants in some gram-negative bacteria isolated from the human organism and from the outer habitat. 277

Materialy nauchnykh konferentsii, Kiev, 1959. 288pp
(Kievskiy Nauchno-issledovatel'skiy Institut Epidemiologii i Mikrobiologii)

Y EL'SHIN, M. I.

Lineynyye differentsia'nyye uravneniya s peremennymi koeffitsiyentami. M.,
Dissertatsiya (1937).
K probleme kolebaniy lineynogo differentsial'nogo uravneniya vtorogo poryadka.
DAN, 18 (1938), 141-146.
Ob odnom metode vychisleniya fazy lineynogo uravneniya vtorogo poryadka. M.,
uchen, zap un-ta, 45 (1940), 97-108.
K usloviyu, pri kotorykh resheniye lineynoy sistemy vtorogo poryadka i meet
dva nulya. DAN, 51 (1946), 573-576.

SO: Mathematics in the USSR, 1917-1947
edited by Kurosh, A. G.,
Markushevich, A. I.,
Rashevskiy, P. E.
Moscow-Leningrad, 1948

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001962610020-4

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001962610020-4"

YEL'SHIN, N. I.

21326

YEL'SHIN, N. I. O Lineynykh sistemakh S ustanaulivayushisya krugovlmi dvizheniyami. Uchen. Zapiski (Mosk, Gos. UN-T Im. Lomonosova), Vyp. 135, Matematika, T. II, 1948 (NA Obl: 1949), S. 173-87.

SO: Letopis' Zhurnal'nykh Statey, No. 29, Moskva, 1949.

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001962610020-4

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001962610020-4"

PA 3/50752

USSR/Mathematics - Differential Equations

11 Sep 49

"Qualitative Problems of a Second-Order Linear Differential Equation," M. I. Yel'shin, 4 pp

"Dokl Ak Nauk SSSR" Vol LXVIII, No 2

With every open interval $a < t < b(1)$ including cases where $a = -\infty$ or $b = +\infty$ is a functional space $R \equiv (p, q)(2)$ of differential equations $x'' + p(t)x' + q(t)x = 0$ (3) with coefficients p and q continuous in (1). Solves qualitative problems of equation (3) with the condition to separate from the space (2) a manifold upon which the general solution of equation (3) will have certain properties in the interval (1). Submitted by Acad I. G. Petrovsky 13 Jul 49.

3/50752

YEL'SHIN, M.I.

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001962610020-4

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001962610020-4"

Yel'shin, M. I.
USSR/Mathematics - Qualitative nonlinear theory

FD-457

Card 1/1 : Pub. 64 - 9/11

Author : Yel'shin, M. I. (Moscow)

Title : Method of comparison in the qualitative theory of the incomplete second-order differential equation

Periodical : Mat. sbor., 34 (76), 323-330, Mar/Apr 1954

Abstract : Notes that the solution to many problems in physics and engineering (e.g. in the theories of autonomic oscillations, regulation, gyroscopes, pendulums, synchronous motors, and servos) reduces to qualitative problems of the differential equation $x'' = f(x, x')$, where the primes indicate differentiation with respect to time. This explains the large number of mathematical studies on particular classes of such equations (see V. V. Nemytskiy and V. V. Stepanov, Kachestvennaya teoriya differentsial'nykh uravneniy [Qualitative Theory of Differential Equations], Moscow-Leningrad, 1949).

Institution :

Submitted : April 29, 1953

YEL'SHIN, M.I.

Qualitative study of a system of two linear uniform equations of
the first order. Dokl. AN SSSR 94 no.1:5-8 Ja '54. (MLRA 7:1)
(Differential equations, Linear)

YEL'SHIN, M.I.

Qualitative study of the motion equation of the rotor of a
synchronous machine. Nauch. dokl. vys. shkoly; energ. no.1:45-57
'58. (MIRA 11:10)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
(Electric machinery, Synchronous)
(Differential equations)

YEL'SHIN, M. I.

16(1)

PLANE I BOOK EXPLOITATION

SOV/2660

Trudy, t. 8; Kratkiye soobrazheniya matematicheskoy doklady. Doklady tional Conference (Transactions of the 3rd All-Union Mathema- Reports of Foreign Scientists) Moscow, 1959. 247 p. 2,200 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Matematicheskii Institut.

Tech. Ed.: G.M. Shevchenko; Editorial Board: A.A. Abramov, V.O. Boltyanskii, A.M. Vasil'yev, R.Y. Medvedev, A.D. Myshkis, S.M. Ruzhitskiy (Resp. Ed.), A.D. Potinikov, Yu. V. Prokhorov, E.A. Shilov, P. L. Ulyanov, V.A. Uspenskiy, N.O. Chetayev, G. Ye. Shilov, and A.I. Shirashov.

PURPOSE: This book is intended for mathematicians and physicists.

COVERAGE: The book is Volume IV of the Transactions of the Third All-Union Mathematical Conference, held in June and July 1956. The book is divided into two main parts. The first part contains summaries of the papers presented by Soviet scientists at the Conference that were not included in the first two volumes. The second part contains the text of reports submitted to the Conference by non-Soviet scientists. In those cases when the non-Soviet scientist did not submit a copy of his paper to the editor, the title of the paper is cited and the paper was printed in a previous volume. Reference is made to the appropriate volume. The papers, with Soviet and non-Soviet contributions, cover various topics in algebra, differential and integral equations, function theory, functional analysis, probability theory, topology, mathematical problems of mechanics and physics, computational mathematics, mathematical logic and the foundations of mathematics, and the history of mathematics.

- Yel'shin, M. I. (Moscow). Qualitative theory of a linear differential equation of the second order. 20
- Yablonskiy, I. N. (Sverdlovsk). The boundary value problem for systems of ordinary differential equations. 21
- Zuber, V. I. (Leningrad). Representation of the solutions of systems of differential equations in the neighborhood of singular initial data. 22
- Zuber, V. I. (Leningrad). Solution of the stability problem by the first method of A.M. Lyapunov. 23
- Zil'ber, A. M. (Moscow). On degenerate equations of elliptic and parabolic type. 23
- Zakharov, I. A. (Khabarovsk). New proof of the Zygmund-Carleson theorem. 24
- Zaslav, A. A. (Leningrad). Studies on the hydrodynamics of a viscous liquid. 25

S/020/62/147/005/004/032
B172/B112

AUTHOR: Yel'shin, M. I.

TITLE: A solution to a classical problem of oscillations

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 147, no. 5, 1962, 1013-1016

TEXT: A study is made of the Sturm problem, i.e. of the properties of p, q required in order that the equation

$$x'' + px' + qx = 0; \quad p, q \in C^{(0)}$$

for $t \geq t_0$ may have the solution $x(t) \neq 0, \in C^{(2)}$ of the oscillatory type.

The following theorem is proved: the solution to (1) is of the oscillatory type if and only if

$$-\frac{p}{2} + \int_{t_0}^t \left(q + \frac{p^2}{4}\right) dt = \beta - \theta; \quad \beta \in C^{(1)}, \theta \in C^{(0)},$$

where

Card 1/2

A solution to a classical problem ...

S/020/62/147/005/004/032
B172/B112

$$\int_{t_0}^{\infty} \exp \left[-2 \int_{t_0}^{\eta} \theta \, d\eta \right] d\eta = \infty,$$

$$\int_{t_0}^{\infty} \exp \left[2 \int_{t_0}^{\eta} \theta \, d\eta \right] (\beta' + \theta^2) d\eta = \infty;$$

The application of this test is discussed.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

PRESENTED: June 23, 1962, by L. S. Pontryagin, Academician

SUBMITTED: June 23, 1962

Card 2/2

YEL'SHIN, M.I.

A solution to the classical problem of oscillations. Dokl. AN
SSSR 147 no. 5:1013-1016 'D '62. (MIRA 16:2)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
Predstavleno akademikom L.S. Pontryaginym.
(Differential equations--Numerical solutions)

FRESTA, N.Ya.; YELSHIN, N.N.

Industrial apparatus of British exhibition for 1955 in London.
Khim. prom. no.3:173-183 Ap-My '56. (MLRA 9:10)

(Great Britain--Chemical apparatus)

SOV/112-58-3-4543

5(1)

Translation from: Referativnyy zhurnal. Elektrotehnika, 1958, Nr 3, p 166 (USSR)

AUTHOR: Kirikov, G. N., Festa, N. Ya., and Yelshin, N. N.

TITLE: Prospects for Automating Chemical Industry and Scientific Objectives
(Perspektivy razvitiya avtomatizatsii v khimicheskoy promyshlennosti i zadachi nauki)

PERIODICAL: V sb.: Sessiya AN SSSR po nauchn. probl. avtomatiz. proiz-va.
Kompleksn. avtomatiz. proiz. protsessov. M., AS USSR, 1957, pp 209-230

ABSTRACT: The state of automation in various branches of the chemical industry is considered, and programs for these branches are outlined for the next few years. Blueprints provide that the expense of automation in the basic chemical industries and in nitrogen, soda, and chlorine industries will constitute 3-6%, and in the organic-synthesis chemical industry, up to 12-14% of the total capital investment. In the USA, the expenses for automation of the chemical industry amount to 10-15% for existing plants and up to 20-25% of the total

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capital investment for plants still being designed. The general trend of chemical-industry automation has been toward complex automation of all production, and including a centralized control. Mathematical control machines should be used for automatic maintenance of the optimum technological conditions corresponding to a specified load, particularly in case of fast phenomena. Making a smaller number of larger units is contemplated, which would result in a better automation and in reduced investment. A considerable reduction of service personnel is expected, mainly due to automation of analytic checking operations. At present, about 20,000 laboratory technicians are engaged in various analyses in the chemical industry. Also of great importance is the automation of quality control and of product sorting where over 10,000 men are now engaged, and also weighing, proportioning and packaging operations where about 8,000 men are now engaged. A reduction in repairs is also expected because equipment wear in automated industry is

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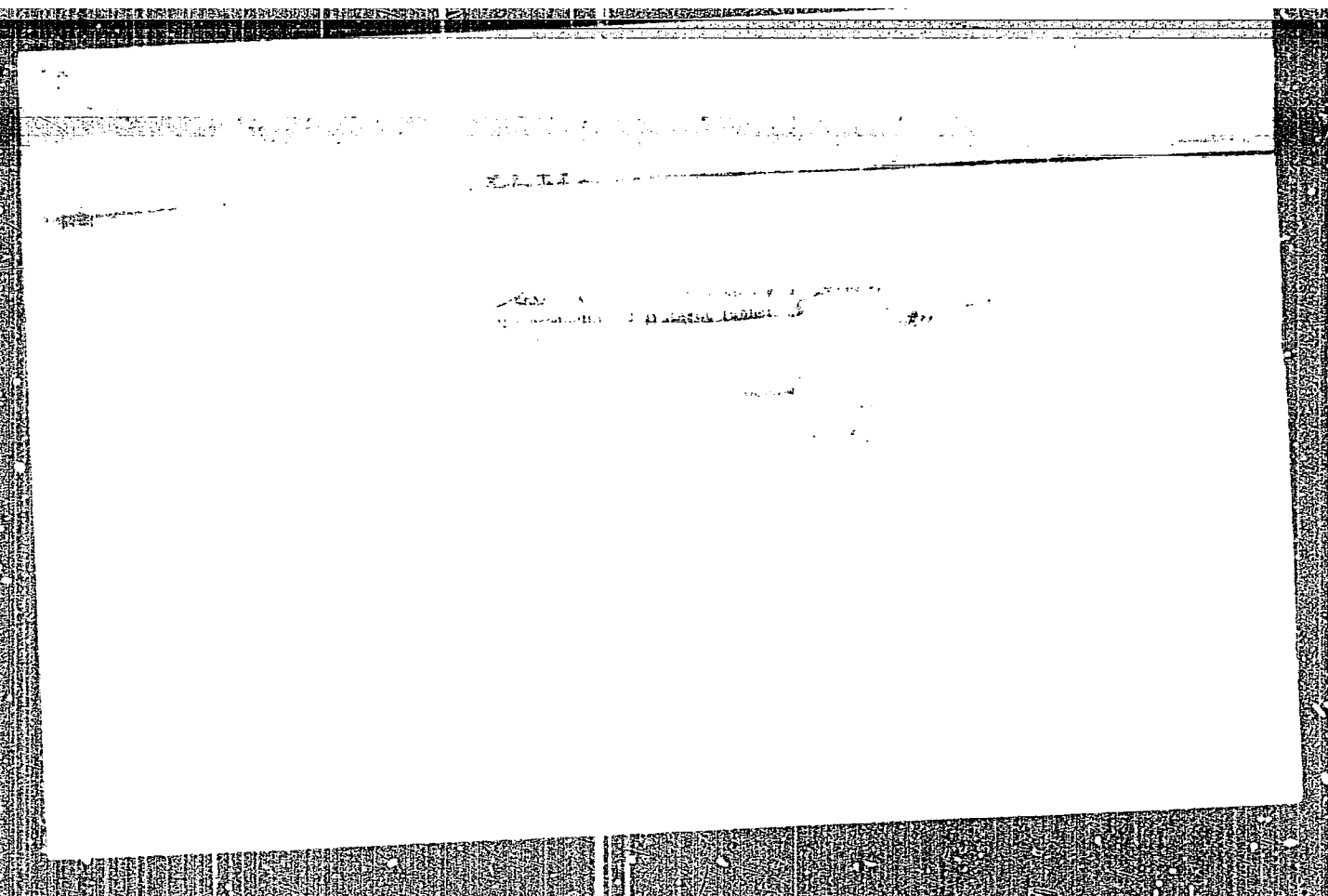
considerably less than in nonautomated industry. A positive synchronization between individual members of the process resulting from automation permits reducing intermediate capacities, in some cases abolishing them altogether. Examples are cited of increased productivity in automated industries. Automation can also result in reducing raw-material consumption by 0.5-2%. Measures which need developing in order to further automation in the chemical industry are listed.

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CIA-RDP86-00513R001962610020-4



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